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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,033	05/13/2005	Marcus Soderlund	9342-51	3566

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EXAMINER	
GUZMAN, APRIL S	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
10/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/535,033	SODERLUND, MARCUS	
	<b>Examiner</b>	<b>Art Unit</b>	
	April S. Guzman	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/13/05, 01/10/07</u>  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2618

## **DETAILED ACTION**

### ***Response to Amendment***

The Examiner acknowledges the receipt of Applicant's amendments filed 07/31/2007.

Claims 1, 7, and 17 have been amended. Claims 6 and 19 have been cancelled. Claims 1-5, and 7-18 are therefore currently pending in the present application.

### ***Response to Arguments***

Applicant's arguments, filed 07/31/2007, with respect to the rejection(s) of claim(s) 1-5, and 7-18 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of **Goldenberg (U.S. Patent # 5,363,089)** in view of **Ueyama et al. (U.S. Patent # 6,990,355)**.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 2618

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-10, 13-14, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Goldenberg (U.S. Patent # 5,363,089)** in view of **Ueyama-et al. (U.S. Patent # 6,990,355)**.

Consider **claim 1**, Goldenberg teaches a portable electronic device (Abstract, column 1 lines 6-10, column 2 lines 63-67) comprising:

a first part (read as first body portion 105) comprising electrical circuits and having an exterior side, an interior side, and top and bottom sides (read as first end 115) (Figure 1, Figure 10, column 2 lines 63-65, and column 5 lines 39-54);

a second part (read as second body portion 110) also including comprising electrical circuits and having an exterior side, an interior side and top and bottom sides (read as second end 120) (Figure 1, Figure 10, column 2 lines 63-65, and column 5 lines 39-54);

at least one hinge (read as hinge mechanism 300) connecting the bottom sides of the first and second parts to each other and allowing rotation of one of the first and second parts approximately 360 degrees relative to the other of the first and second parts (Figure 4, Figure 5, Figure 6, column 4 lines 1-7, column 4 lines 17-21, column 4 lines 45-51, and column 4 lines 60-67);

a set of flexible electrical conductors connected to the second part at the exterior side adjacent the bottom side thereof and connected to the first part at the interior side adjacent the bottom side thereof (Figure 5, and column 4 lines 27-44).

However, Goldenberg fails to the set of flexible conductors connected to the first part at the exterior side adjacent the bottom side thereof and connected to the second part at the interior side adjacent the bottom side thereof and a second set of flexible electrical conductors.

In the related art, Ueyama et al. teach the set of flexible conductors connected to the first part at the exterior side adjacent the bottom side thereof and connected to the second part at the interior side adjacent the bottom side thereof and a second set of flexible electrical conductors (Figure 5, Figure 6, Figure 7, and column 3 lines 19-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ueyama et al. into the teachings of Goldenberg for the purpose of providing a flexible printed circuit board that can be arranged easily and to provide a folding-type cellular telephone terminal employing such a flexible printed circuit board making it possible to prevent damage to the flexible printed circuit board.

Consider **claim 2, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. further teach wherein the first set of electrical conductors stretches around the bottom side of the first part when the portable electronic device is folded (Goldenberg – Figure 1, Figure 5, Figure 7, and column 4 lines 27-44).

Consider **claim 3, as applied to claim 2 above**, Goldenberg as modified by Ueyama et al. further teach wherein the first set of electrical conductors stretches around the bottom side of the second part when the first and second parts are rotated approximately 360 degrees relative to each other (Goldenberg – Figure 1, Figure 5, Figure 7, and column 4 lines 27-44).

Consider **claim 4, as applied to claim 2 above**, Goldenberg as modified by Ueyama et al. further teach wherein the first set of conductors is right angles to the bottom sides of the first

Art Unit: 2618

and second parts (Goldenberg - Figure 1, Figure 2, Figure 5, Figure 7, column 3 lines 14-22, and column 4 lines 27-68).

Consider **claim 5, as applied to claim 2 above**, Goldenberg as modified by Ueyama et al. further teach wherein the first set of flexible electrical conductors is separate from the hinge structure of the portable electronic device (Goldenberg - Figure 1, Figure 2, Figure 4, Figure 5, Figure 11, column 3 lines 14-22, and column 4 lines 27-68).

Consider **claim 7, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. further teach wherein the second set of flexible electrical conductors stretch around the bottom side of the second part when the portable electronic device is folded (Goldenberg - Figure 1, Figure 5, Figure 7, and column 4 lines 27-44; Ueyama et al. - Abstract, Figure 5, Figure 6, Figure 7, column 3 lines 19-53, column 47-67, and column 5 lines 1-6).

Consider **claim 8, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. further teach wherein both the bottom sides of the first and second parts have a rounded shape (Goldenberg - Figure 1, Figure 2, Figure 5, Figure 6, column 2 lines 63-67, column 3 lines 1-22, and column 3 lines 34-46).

Consider **claim 9, as applied to claim 2 above**, Goldenberg as modified by Ueyama et al. further teach wherein the bottom sides of the first and second parts have at least one groove therein that is configured to receive the first set of flexible electrical conductors (Goldenberg - Figure 1, Figure 2, Figure 4, Figure 11, column 3 lines 34-40, and column 4 lines 1-44).

Consider **claim 10, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. further teach wherein one of the parts comprises gears connected to its bottom side and the other of the parts is provided with gaps with which the gears mesh (Goldenberg - Figure 1,

Art Unit: 2618

Figure 2, Figure 4, Figure 5, Figure 6, column 2 lines 63-67, column 3 lines 1-7, column 3 lines 34-40, column 4 lines 1-16, and column 4 lines 45-51).

Consider **claim 13, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. further teach wherein the first set of flexible electrical conductors of comprises a flex film (read as flexible circuit 215) (Goldenberg - Figure 2, figure 4, Figure 5, column 2 lines 63-67, column 3 lines 1-46, and column 4 lines 27-44; Ueyama et al. - Figure 5, Figure 6, Figure 7, and column 3 lines 19-53).

Consider **claim 14, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. further teach wherein the first set of flexible electrical conductors comprises a cable having a plurality of wires (Goldenberg - Figure 2, figure 4, Figure 5, column 2 lines 63-67, column 3 lines 1-46, and column 4 lines 27-44; Ueyama et al. - Figure 5, Figure 6, Figure 7, and column 3 lines 19-53).

Consider **claim 16, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. further teach wherein the device comprises a cellular phone (Goldenberg - Figure 1, Figure 10, column 1 lines 6-10, and column 2 lines 63-67; Ueyama et al. - Figure 6, Figure 7, and column 4 lines 47-61).

**Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldenberg (U.S. Patent # 5,363,089) in view of Ueyama et al. (U.S. Patent # 6,990,355), and further in view of Jantschek (U.S. Patent # 5,966,777).**

Consider **claim 11, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. teach at least one hinge connecting the bottom sides of the first and second parts to each other

Art Unit: 2618

and allowing rotation of one of the first and second parts relative to the other of the first and second parts.

However, Goldenberg as modified by Ueyama et al. fail to teach wherein the at least one hinge comprises a plate having two sections, each of the two sections of the plate having an axis of rotation that is displaced in the plane of the plate from the axis of rotation of the other of the two sections, and each of the two sections of the plate having a protrusion on opposite sides in a middle of an area of the section that corresponds to the axis of rotation.

In the related art, Jantschek teaches wherein the at least one hinge comprises a plate having two sections, each of the two sections of the plate having an axis of rotation that is displaced in the plane of the plate from the axis of rotation of the other of the two sections, and each of the two sections of the plate having a protrusion on opposite sides in a middle of an area of the section that corresponds to the axis of rotation (Figure 10, Figure 11, column 3 lines 64-67, and column 4 lines 1-16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Jantschek into the teachings of Goldenberg as modified by Ueyama et al. for the purpose of a hinge to permit 360 degrees of smooth articulation for the respective members which are pivotally connected whether both members are to be articulable or one member to be stationary.

Consider **claim 12, as applied to claim 11 above**, Goldenberg as modified by Ueyama et al. and further modified by Jantschek further teach wherein each of the parts has a slit configured to receive one of the sections of the plate, and each of the parts further defines cavities on opposite sides of the slit within the interior of the parts configured to receive the protrusions of



Art Unit: 2618

the sections and to secure the hinge in the parts (Jantschek – Figure 10, Figure 11, column 3 lines 64-67, and column 4 lines 1-16).

**Claim 15, and 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Goldenberg (U.S. Patent # 5,363,089)** in view of **Ueyama et al. (U.S. Patent # 6,990,355)**, and further in view of **Suso et al. (U.S. Patent # 6,466,202)**.

Consider **claim 15, as applied to claim 1 above**, Goldenberg as modified by Ueyama et al. teach the first part and the second part.

However, Goldenberg as modified by Ueyama et al. fail to teach wherein the first part comprises an image captioning unit having a lens on the interior side of the first part, and the second part comprises a display on the interior side of the second part.

In the related art, Suso et al. teach wherein the first part comprises an image captioning unit having a lens on the interior side of the first part, and the second part comprises a display on the interior side of the second part (Abstract, column 2 lines 21-33, column 3 lines 17-31, and column 4 lines 3-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Suso et al. into the teachings of Goldenberg as modified by Ueyama et al. for the purpose of allowing a video camera to be incorporated to a coupling part so as to be rotated wherein the direction of a video camera can be freely changed irrespective of the position of the first and second casing to enhance the convenience.

Consider **claim 17**, Goldenberg teaches a portable electronic device comprising:

Art Unit: 2618

a first part (read as first body portion 105) comprising electrical circuits and having an exterior side, an interior side, and top and bottom sides (read as first end 115) (Figure 1, Figure 10, column 2 lines 63-65, and column 5 lines 39-54);

a second part (read as second body portion 110) comprising electrical circuits and having an exterior side, an interior side and top and bottom sides (read as second end 120) (Figure 1, Figure 10, column 2 lines 63-65, and column 5 lines 39-54);

at least one hinge (read as hinge mechanism 300) connecting the bottom sides of the first and second parts to each other and allowing rotation of one of the first and second parts approximately 270 degrees relative to the other of the first and second parts (Figure 4, Figure 5, Figure 6, column 4 lines 1-7, column 4 lines 17-21, column 4 lines 45-51, and column 4 lines 60-67);

a set of flexible electrical conductors connected to the second part at the exterior side adjacent the bottom side thereof and connected to the first part at the interior side adjacent the bottom side thereof (Figure 5, and column 4 lines 27-44).

However, Goldenberg fails to the set of flexible conductors connected to the first part at the exterior side adjacent the bottom side thereof and connected to the second part at the interior side adjacent the bottom side thereof and a second set of flexible electrical conductors, wherein the first part comprising an image captioning unit having a lens on the interior side of the first part, and the second part comprises a display on the interior side of the second part, and wherein the first and second set of flexible electrical conductors electrically connect the electrical circuits of the first and second parts.

In the related art, Ueyama et al. teach to the set of flexible conductors connected to the first part at the exterior side adjacent the bottom side thereof and connected to the second part at the interior side adjacent the bottom side thereof and a second set of flexible electrical conductors, and wherein the first and second set of flexible electrical conductors electrically connect the electrical circuits of the first and second parts (Figure 5, Figure 6, Figure 7, column 3 lines 19-53, and column 4 lines 47-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ueyama et al. into the teachings of Goldenberg for the purpose of providing a flexible printed circuit board that can be arranged easily and to provide a folding-type cellular telephone terminal employing such a flexible printed circuit board making it possible to prevent damage to the flexible printed circuit board.

However, Goldenberg as modified by Ueyama et al. fail to teach wherein the first part comprising an image captioning unit having a lens on the interior side of the first part, and the second part comprises a display on the interior side of the second part.

In the related art, Suso et al. teach wherein the first part comprising an image captioning unit having a lens on the interior side of the first part, and the second part comprises a display on the interior side of the second part (Abstract, column 2 lines 21-33, column 3 lines 17-31, and column 4 lines 3-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Suso et al. into the teachings of Goldenberg as modified by Ueyama et al. for the purpose of allowing a video camera to be incorporated to a coupling part so as to be rotated wherein the direction of a video camera can be freely changed

Art Unit: 2618

irrespective of the position of the first and second casing to enhance the convenience.

Consider **claim 18, as applied to claim 17 above**, Goldenberg as modified by Ueyama et al. and further modified by Suso et al. further teach wherein the hinge allows rotation of one of the first and second parts approximately 360 degrees relative to the other of the first and second parts (Goldenberg – column 4 lines 60-67, and column 6 lines 28-32).

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: see PTO-892 Notice of References Cited.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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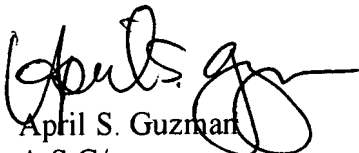
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Alexandria, VA 22314


Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

Art Unit: 2618

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
April S. Guzman  
A.S.G/asg

  
10-15-07  
LANA LE  
PRIMARY EXAMINER